

What is claimed is:

- 1 1. A method for determining an upsell of a purchase at a point-of-sale terminal, comprising:
2 generating a purchase price of the purchase;
3 generating a rounded price;
4 calculating a round-up amount, the round-up amount being a difference between the
5 purchase price and the rounded price;
6 determining an upsell in dependence on the round-up amount; and
7 outputting a signal indicative of the upsell.
- 1 2. The method of claim 1 in which the step of generating a rounded price comprises:
2 generating the rounded price based on the purchase price.
- 1 3. The method of claim 2, in which the step of generating the rounded price based on the
2 purchase price comprises:
3 determining a rounding multiple that corresponds to the purchase price; and
4 rounding the purchase price in accordance with the rounding multiple, thereby generating
5 the rounded price.
- 1 4. The method of claim 1 in which the step of generating a rounded price comprises:
2 setting the rounded price to a first value if the purchase does not include a predetermined
3 item; and

1 ²/₁₃. A method for generating a coupon, comprising:
2 generating a purchase price of a purchase;
3 generating a rounded price;
4 calculating a round-up amount, the round-up amount being a difference between the
5 purchase price and the rounded price; and
6 printing on the coupon an identifier based on the round-up amount.

1 ²/₁₄. A method for generating a coupon, comprising:
2 generating a purchase price of a purchase;
3 generating a rounded price;
4 calculating a round-up amount, the round-up amount being a difference between the
5 purchase price and the rounded price;
6 setting a coupon value based on the round-up amount; and
7 printing on the coupon an identifier that is based on the coupon value.

1 ³/₁₅. The method of claim ²/₁₄ further comprising:
2 setting a coupon feature based on a condition;
3 and in which the step of printing comprises
4 printing an identifier that is based on the coupon value and the coupon feature.

1 ⁴/₁₆. The method of claim ³/₁₅ in which the coupon feature is a validity period.

5
1 17. The method of claim 16 in which the step of setting a coupon feature based on a
2 condition comprises:
3 determining a time of a previous transaction;
4 determine a time interval since the previous transaction; and
5 setting the validity period based on the time interval since the previous transaction.

6
1 18. The method of claim 17 in which the step of setting the validity period based on the time
2 interval since the previous transaction comprises
3 setting the validity period to be shorter than the time interval since the previous
4 transaction.

7
1 19. The method of claim 17 further comprising:
2 receiving a customer identifier;
3 and in which the step of determining a date of a previous transaction comprises:
4 determining a date of a previous transaction that is based on the customer identifier.

8
1 20. The method of claim 16 in which the step of setting a coupon feature based on a
2 condition comprises:
3 determining a current time; and
4 setting the validity period based on the current time.

9
1 21. The method of claim 20 in which the step of setting the validity period based on the
2 current time comprises:

3 setting the validity period to exclude an interval that corresponds to the current time.

10
1 ~~22~~. The method of claim ~~16~~³ in which the coupon feature is a required item.

11
1 ~~23~~. The method of claim ~~22~~¹⁰ in which the step of setting a coupon feature based on a
2 condition comprises:

3 receiving a customer identifier;

4 determining a coupon redemption that is based on the customer identifier; and

5 setting the required item based on the coupon redemption.

12
1 ~~24~~. The method of claim ~~23~~¹¹ in which the step of setting the required item based on the
2 coupon redemption comprises:

3 setting the required item to be a predetermined item if the coupon redemption is greater
4 than a predetermined threshold.

13
1 ~~25~~. The method of claim ~~24~~¹¹ in which the step of setting the required item based on the
2 coupon redemption comprises:

3 determining an infrequent item that is based on the customer identifier; and

4 setting the required item to be the infrequent item if the coupon redemption is greater
5 than a predetermined threshold.

14
1 ~~26~~. The method of claim ~~25~~¹⁰ in which the step of setting a coupon feature based on a
2 condition comprises:

- 3 receiving a customer identifier;
- 4 determining a number of past purchases of an item, the number being based on the
- 5 customer identifier; and
- 6 setting the required item based on the number of past purchases of the item.

- 1 ¹⁵~~27~~. The method of claim ²~~14~~ in which the step of setting a coupon value based on the round-
- 2 up amount comprises:
- 3 setting the coupon value based on the round-up amount and a condition.

- 1 ¹⁴~~28~~. The method of claim ¹⁵~~27~~ in which the step of setting the coupon value based on the round-
- 2 up amount and a condition comprises:
- 3 determining whether the purchase includes coupon redemption;
- 4 setting the coupon value to a first value if the purchase includes coupon redemption;
- 5 setting the coupon value to a second value if the purchase does not include coupon
- 6 redemption, the second value being greater than the first value, the first value and the second
- 7 value being based on the round-up amount.

- 1 ¹⁷~~29~~. The method of claim ¹⁵~~27~~ in which the step of setting the coupon value based on the round-
- 2 up amount and a condition comprises:
- 3 determining a payment type; and
- 4 setting the coupon value based on the payment type.

18
36. The method of claim 29 in which the step of setting the coupon value based on the round-
up amount and a condition comprises:
determining whether a payment type is currency;
setting the coupon value to a first value if the payment type is currency; and
setting the coupon value to a second value if the payment type is not currency, the second
value being greater than the first value, the first value and the second value being based on the
round-up amount.

19
37. The method of claim 29 in which the step of setting the coupon value based on the round-
up amount and a condition comprises:
determining whether a frequent shopper identifier is received;
setting the coupon value to a first value if a frequent shopper identifier is received; and
setting the coupon value to a second value if no frequent shopper identifier is received,
the second value being greater than the first value, the first value and the second value being
based on the round-up amount.

20
38. The method of claim 29 in which the step of setting the coupon value based on the round-
up amount and a condition comprises:
receiving a customer identifier;
determining a coupon redemption that is based on the customer identifier; and
setting the coupon value based on the coupon redemption.

21 20
1 3~~3~~. The method of claim 3~~2~~ in which the step of setting the coupon value based on the
2 coupon redemption comprises:
3 determining a number of transactions based on the customer identifier;
4 determining a number of coupons redeemed based on the customer identifier;
5 calculating a redemption rate based on the number of coupons redeemed and the number
6 of transactions; and
7 setting the coupon value based on the redemption rate.

22 15
1 3~~4~~. The method of claim 2~~1~~ in which the step of setting the coupon value based on the round-
2 up amount and a condition comprises:
3 receiving a customer identifier;
4 determining an acceptance rate that is based on the customer identifier; and
5 setting the coupon value based on the acceptance rate.

23 15
1 3~~5~~. The method of claim 2~~1~~ in which the step of setting the coupon value based on the round-
2 up amount and a condition comprises:
3 receiving a customer identifier;
4 determining a number of transactions that is based on the customer identifier; and
5 setting the coupon value based on the number of transactions.

24 23
1 3~~6~~. The method of claim 3~~5~~ in which the step of setting the coupon value based on the
2 number of transactions comprises:

3 setting the coupon value to a first value if the number of transactions does not correspond
 4 to a multiple of a predetermined number; and
 5 setting the coupon value to a second value if the number of transactions corresponds to a
 6 multiple of a predetermined number, the second value being greater than the first value, the first
 7 value and the second value being based on the round-up amount.

1 ²⁵37. The method of claim ¹⁵27 in which the step of setting the coupon value based on the round-
 2 up amount and a condition comprises:

3 receiving a customer identifier;
 4 determining a number of coupons redeemed that is based on the customer identifier; and
 5 setting the coupon value based on the number of coupons redeemed.

1 ²⁴38. The method of claim ²⁵37 in which the step of setting the coupon value based on the
 2 number of coupons redeemed comprises:
 3 setting the coupon value to a first value if the number of coupons redeemed does not
 4 correspond to a multiple of a predetermined number; and
 5 setting the coupon value to a second value if the number of coupons redeemed
 6 corresponds to a multiple of a predetermined number, the second value being greater than the
 7 first value, the first value and the second value being based on the round-up amount.

1 ²⁷39. The method of claim ²14, in which the identifier comprises a bar code.

1 ²⁴40. The method of claim ²⁷39, further comprising:

2 encoding the coupon value in the bar code.

1 ²⁹41. The method of claim ²⁷39, further comprising:

2 encoding a coupon feature in the bar code.

1 ³⁰42. The method of claim ²14, further comprising:
2 storing the coupon value in a record that is determinable from the identifier.

1 ³¹43. A method for generating a coupon, comprising:
2 generating a purchase price of a purchase;
3 generating a rounded price;
4 calculating a round-up amount, the round-up amount being a difference between the
5 purchase price and the rounded price;
6 printing on the coupon an indication of the round-up amount;
7 printing on the coupon an indication of an upsell;
8 receiving an indication of the round-up amount on a coupon; and
9 exchanging the round-up amount for the coupon.

1 ³²44. The method of claim ³¹43 in which the indication of a round-up amount comprises a bar
2 code.

1 ³³45. A method for generating a coupon, comprising:
2 generating a purchase price of a purchase;

- 3 generating a rounded price;
- 4 calculating a round-up amount, the round-up amount being a difference between the
- 5 purchase price and the rounded price;
- 6 setting a coupon value based on a predetermined multiple of the round-up amount; and
- 7 printing on the coupon an identifier that is based on the coupon value.

- 1 ³⁴~~46~~. The method of claim ³³~~45~~ in which the step of setting a coupon value based on a
- 2 predetermined multiple of the round-up amount comprises:

- 3 setting the coupon value to three times the round-up amount.

- 1 ³⁵~~47~~. A method for generating a coupon, comprising:
- 2 generating a purchase price of a purchase;
- 3 generating a rounded price;
- 4 calculating a round-up amount, the round-up amount being a difference between the
- 5 purchase price and the rounded price;
- 6 determining whether the purchase includes coupon redemption; and
- 7 if the purchase includes coupon redemption,
- 8 setting a coupon value based on the round-up amount, and
- 9 printing on the coupon an identifier that is based on the coupon value.

- 1 ~~48~~. An apparatus for determining an upsell of a purchase at a point-of-sale terminal,
- 2 comprising:
- 3 a storage device; and

4 a processor connected to the storage device,
 5 the storage device storing a program for controlling the processor; and
 6 the processor operative with the program to:
 7 generate a purchase price of the purchase;
 8 generate a rounded price;
 9 calculate a round-up amount, the round-up amount being a difference between the
 10 purchase price and the rounded price;
 11 determine an upsell in dependence on the round-up amount; and
 12 output a signal indicative of the upsell.

34
 1 49. An apparatus for generating a coupon, comprising:
 2 a storage device; and
 3 a processor connected to the storage device,
 4 the storage device storing a program for controlling the processor; and
 5 the processor operative with the program to:
 6 generate a purchase price of a purchase;
 7 generate a rounded price;
 8 calculate a round-up amount, the round-up amount being a difference between the
 9 purchase price and the rounded price; and
 10 print on the coupon an identifier based on the round-up amount.

37
 1 50. An apparatus for generating a coupon, comprising:
 2 a storage device; and

3 a processor connected to the storage device,
4 the storage device storing a program for controlling the processor; and
5 the processor operative with the program to:
6 generate a purchase price of a purchase;
7 generate a rounded price;
8 calculate a round-up amount, the round-up amount being a difference between the
9 purchase price and the rounded price;
10 set a coupon value based on the round-up amount; and
11 print on the coupon an identifier that is based on the coupon value.

51. An apparatus for generating a coupon, comprising:

- a storage device; and
- a processor connected to the storage device, the storage device storing a program for controlling the processor; and the processor operative with the program to:
 - generate a purchase price of a purchase;
 - generate a rounded price;
 - calculate a round-up amount, the round-up amount being a difference between the purchase price and the rounded price;
 - print on the coupon an indication of the round-up amount;
 - print on the coupon an indication of an upsell;
 - receive an indication of the round-up amount on a coupon; and
 - exchange the round-up amount for the coupon.


```

11         if the purchase includes coupon redemption,
12             set a coupon value based on the round-up amount, and
13             print on the coupon an identifier that is based on the coupon value.

```

54. A computer-readable medium encoded with a program for implementing a method for determining an upsell of a purchase at a point-of-sale terminal, said processing instructions for directing a computer to perform the steps of:

- generating a purchase price of the purchase;
- generating a rounded price;
- calculating a round-up amount, the round-up amount being a difference between the purchase price and the rounded price;
- determining an upsell in dependence on the round-up amount; and
- outputting a signal indicative of the upsell.

5. A computer-readable medium encoded with a program for implementing a method for generating a coupon, said processing instructions for directing a computer to perform the steps of:

- generating a purchase price of a purchase;
- generating a rounded price;
- calculating a round-up amount, the round-up amount being a difference between the purchase price and the rounded price; and
- printing on the coupon an identifier based on the round-up amount.

42
1 56. A computer-readable medium encoded with a program for implementing a method for
2 generating a coupon, said processing instructions for directing a computer to perform the steps
3 of:
4 generating a purchase price of a purchase;
5 generating a rounded price;
6 calculating a round-up amount, the round-up amount being a difference between the
7 purchase price and the rounded price;
8 setting a coupon value based on the round-up amount; and
9 printing on the coupon an identifier that is based on the coupon value.

43
1 57. A computer-readable medium encoded with a program for implementing a method for
2 generating a coupon, said processing instructions for directing a computer to perform the steps
3 of:
4 generating a purchase price of a purchase;
5 generating a rounded price;
6 calculating a round-up amount, the round-up amount being a difference between the
7 purchase price and the rounded price;
8 printing on the coupon an indication of the round-up amount;
9 printing on the coupon an indication of an upsell;
10 receiving an indication of the round-up amount on a coupon; and
11 exchanging the round-up amount for the coupon.

